

WEB PAGE DESIGN I

COURSE DESCRIPTION

This course, which is the first level of Web Page Design for the Internet, prepares students with work-related, leadership, and employability skills for advancement into the Web Page Design II course. Course content provides students the opportunity to acquire basic fundamental skills in both theory and practical applications of language, structure, and typography. Course content stresses layout and design guidelines as applied in the design of markup language documents. Laboratory facilities and experiences simulate those found in the Web page design and construction industry.

Pre-requisite:	Information Technology Infrastructure; Algebra I or Math for Technology (may be concurrent)
Recommended Credits:	1
Recommended Grade Levels:	10 th or 11th

WEB PAGE DESIGN I STANDARDS
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- 1.0 Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace.
- 2.0 Students will demonstrate an advanced knowledge of the Internet and various terms, tools, and utilities associated with the World Wide Web and markup languages, such as HTML.
- 3.0 Students will evaluate the relationship between Web site and Web page design.
- 4.0 Students will analyze variations of markup languages.
- 5.0 Students will plan and develop Web site structure and design.
- 6.0 Students will edit and modify markup language, such as HTML documents.
- 7.0 Students will construct a Web page.
- 8.0 Students will organize and connect multiple Web documents using hyperlinks, anchors, and bookmarks.
- 9.0 Students will evaluate Web browser restrictions with markup languages, such as HTML.
- 10.0 Students will evaluate markup language tags as identified by the World Wide Web Consortium (W3C).
- 11.0 Students will evaluate the process for creating and editing graphic images for the Web.
- 12.0 Students will apply the appropriate process and technique to create animation.
- 13.0 Students will demonstrate proficiency with the features and utilities available with commercial off-the-shelf (COTS) Web building software.

WEB PAGE DESIGN I

STANDARD 1.0

Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace.

LEARNING EXPECTATIONS

The student will:

- 1.1 Exhibit positive leadership skills.
- 1.2 Participate in SkillsUSA-VICA as an integral part of classroom instruction.
- 1.3 Assess situations and apply problem-solving and decision-making skills to particular client relations in the community, and workplace.
- 1.4 Demonstrate the ability to work cooperatively with others in a professional setting.

PERFORMANCE STANDARDS: EVIDENCE STANDARD IS MET

The student:

- 1.1 Demonstrates character, leadership, and integrity using creative and critical-thinking.
- 1.2.A Applies the points of the creed to personal and professional situations.
- 1.2.B Participates in and conducts meetings and other business according to accepted rules of parliamentary procedure.
- 1.3 Analyzes situations in the workplace and uses problem-solving techniques to solve the problem.
- 1.4.A Participates in a community service project.
- 1.4.B Assists with an officer campaign with Tennessee SkillsUSA-VICA.

SAMPLE PERFORMANCE TASKS

- Create a leadership inventory and use it to conduct a personal assessment.
- Participate in various SkillsUSA-VICA programs and/or competitive events.
- Evaluate an activity within the school, community, and/or workplace and project effects of the project.
- Implement an annual program of work.
- Prepare a meeting agenda for a SkillsUSA-VICA monthly meeting.
- Attend a professional organization meeting.
- Participate in the American Spirit Award competition with SkillsUSA-VICA.

INTEGRATION LINKAGES

SkillsUSA-VICA, *Professional Development Program*, SkillsUSA-VICA, Communications and Writing Skills, Teambuilding Skills, Research, Language Arts, Sociology, Psychology, Math, Math for Technology, Applied Communications, Social Studies, Problem Solving, Interpersonal Skills, Employability Skills, Critical-Thinking Skills, Computer Application Skills, Secretary's Commission on Achieving Necessary Skills (SCANS), Computer Architecture, E-Commerce, Chamber of Commerce, Colleges, Universities, Technology Centers, and Employment Agencies

WEB PAGE DESIGN I

STANDARD 2.0

Students will demonstrate an advanced knowledge of the Internet and various terms, tools, and utilities associated with the World Wide Web and markup languages, such as HTML.

LEARNING EXPECTATIONS

The student will:

- 2.1 Illustrate the relationship of Web design terms to Web designs and software applications.
- 2.2 Navigate successfully between uniform resource locator (URL) links.
- 2.3 Evaluate and apply standard path/file name structure.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:

- 2.1.A Analyzes vocabulary words and acronyms that are unique to the World Wide Web.
- 2.1.B Applies terms during conversation associated with the World Wide Web and markup languages, such as HTML.
- 2.2.A Sets up and uses common Web browsing software to navigate the Internet.
- 2.2.B Illustrates the use of search engines and search terms.
- 2.2.C Configures basic and advanced browser settings to successfully connect to the Internet.
- 2.3.A Differentiates between relative and absolute uniform resource locators (URL).
- 2.3.B Determines the path/file-name syntax to locate files on a computer.
- 2.3.C Distinguishes between DOS and UNIX based path-names.

SAMPLE PERFORMANCE TASKS

- Evaluate methods used or actions taken and assign the appropriate term.
- Given a pre-constructed Web page, students will correctly define the tags and identify the techniques used.
- Discuss the relationships between the different types of uniform resource locators (URL).
- Using Internet Explorer or Netscape browser software, configure browser to specifications provided.
- Obtain the anticipated results from search engine queries.
- Recognize and discuss the difference between File Transfer Protocol and HyperText Transfer Protocol.
- Query and use Internet search engines to obtain specified results.
- Given a file location on the Internet, interpret the files absolute and relative URL from a given position.
- Given a file location on a PC, correctly determine the complete path to the listed file.

- Illustrate both the UNIX and DOS versions of pathnames to a given location.

INTEGRATION LINKAGES

Computer Science, World Wide Web Consortium (W3C), SkillsUSA-VICA, HyperText Markup Language (HTML), Writers Guild (HWG), Internet Navigation Skills, Math, Language Arts, Art & Design, Art, Computer Application Skills, Secretary's Commission on Achieving Necessary Skills (SCANS), Computer Architecture, E-Commerce

Web Page Design I

STANDARD 3.0

Students will evaluate the relationship between Web site and Web page design.

LEARNING EXPECTATIONS

The student will:

- 3.1 Analyze a Web site structure.
- 3.2 Distinguish between the Web site layout and individual page layouts.
- 3.3 Discuss storyboarding to illustrate/plan a Web site layout.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:

- 3.1 Analyzes a given Internet location Web site's structure and layout.
- 3.2 Assesses two or three individual page layouts and distinguishes between page and site layout.
- 3.3 Analyzes the use of storyboards to illustrate the design and layout of a given Web site.

SAMPLE PERFORMANCE TASKS

- Construct a diagram which accurately reflects a given Web site's design and structure.
- Discuss the general layout of pages within the site.
- Construct a storyboard to accurately illustrate the target Web site's layout and design.

INTEGRATION LINKAGES

Computer Science, World Wide Web Consortium (W3C), SkillsUSA-VICA, Hypertext Markup Language (HTML), Writers Guild (HWG), Internet Navigation Skills, Math, Language Arts, Art & Design, Art, Computer Application Skills, Secretary's Commission on Achieving Necessary Skills (SCANS), Computer Architecture, E-Commerce

Web Page Design I

STANDARD 4.0

Students will analyze variations of markup language.

LEARNING EXPECTATIONS

The student will:

- 4.1 Define HTML (HyperText Markup Language) and evaluate the evolution and future trends of markup language.
- 4.2 Evaluate the role of the W3C (World Wide Web Consortium) and their interaction with Web browser manufacturers.
- 4.3 Evaluate markup languages other than HTML.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:

- 4.1.A Charts the development of a markup language such as HTML leading to its current version predicts future trends.
- 4.1.B Differentiates between markup languages, such as HTML, DHTML (Dynamic HyperText Markup Language), and XML (Extensible Markup Language).
- 4.2.A Discusses the W3C (World Wide Web Consortium) and its makeup.
- 4.2.B Explains the consortium
- 4.2.C Compares the relationship between the consortium and Web browser manufacturers.
- 4.2.D Interprets the role of the W3C as the governing body for Web standards and emerging standards.
- 4.3.A Describes the intent of the W3C and its development of markup languages.
- 4.3.B Compares and contrasts various markup languages.

SAMPLE PERFORMANCE TASKS

- Define and distinguish between markup languages, such as HTML, DHTML, and XML.
- Restate the developments leading to the current version of HTML and describe the relationship between HTML and other markup languages.
- Identify and explain the W3C member partners and its 3-host makeup.
- Explain the need for a governing body for Web standards and emerging standards.
- Prepare a presentation of finding on the similarities and differences of markup languages.

INTEGRATION LINKAGES

Computer Science, Computer Science Applications, World Wide Web Consortium (W3C), SkillsUSA-VICA, HyperText Markup Language (HTML) Writers Guild (HWG), Internet Navigation Skills, Math, Language Arts, Art & Design, Art, Computer Application Skills, Secretary's Commission on Achieving Necessary Skills (SCANS), Computer Architecture, E-Commerce

Web Page Design I

STANDARD 5.0

Students will plan and develop Web site structure and design.

LEARNING EXPECTATIONS

The student will:

- 5.1 Distinguish the relationship between Web design, Web site, and World Wide Web.
- 5.2 Analyze procedures for planning, writing, editing, linking, and printing markup language.
- 5.3 Analyze the parts of Web design including design evaluation, information design, interaction design, and presentation design.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:

- 5.1 Compares and contrasts the relationship between Web design, Web site, and World Wide Web.
- 5.2 Plans, writes, edits, and proposes links for a Web site.
- 5.3 Evaluates a provided Web site using design evaluation, information design, interactive design, and presentation design.

SAMPLE PERFORMANCE TASKS

- Develop a presentation explaining the relationship of Web design, Web site, and World Wide Web. Incorporate the parts of Web design and utilize graphics in developing the presentation. Present the information to a school or a community group.

INTEGRATION LINKAGES

Computer Science, World Wide Web Consortium (W3C), SkillsUSA-VICA, HyperText Markup Language (HTML), Writers Guild (HWG), Internet Navigation Skills, Math, Language Arts, Art & Design, Art, Computer Application Skills, Secretary's Commission on Achieving Necessary Skills (SCANS), Computer Architecture, E-Commerce

Web Page Design I

STANDARD 6.0

Students will edit and modify markup language, such as HTML, documents.

LEARNING EXPECTATIONS

The student will:

- 6.1 Analyze the procedures for editing markup language documents.
- 6.2 Understand basic markup language tags to manipulate Web documents.
- 6.3 Format text and work with headers and fonts using appropriate markup language tags.
- 6.4 Modify markup language text, using tags to create form fields for users submission.
- 6.5 Modify markup language text, using tags to create frame pages for site management.
- 6.6 Modify markup language text, using tags to create ordered, unordered, and definition lists.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:

- 6.1.A Explains the use of text editing software to construct markup language pages.
- 6.1.B Explains the procedures for viewing markup language documents with Web browsers to determine results.
- 6.2.A Manipulates markup language to format text and works with fonts while using the appropriate tags.
- 6.2.B Adds appropriate color and/or background images to a formatted Web page.
- 6.3.A Manipulates markup language, using the appropriate tags to create basic form fields.
- 6.3.B Manipulates markup language using the appropriate tags to create an email submission form.
- 6.3.C Uses form fields to create a document update using a markup language, such as HTML.
- 6.4.A Manipulates markup language using the appropriate tags to create frames pages.
- 6.4.B Manipulates markup language using the appropriate tags to use effective frame targeting.
- 6.5.A Manipulates markup language using the appropriate tags to create ordered and unordered lists.
- 6.5.B Manipulates markup language using the appropriate tags to create a definition list.
- 6.5.C Uses nesting techniques to create multi-level nested lists within the three list types above.
- 6.6 Manipulates markup language using appropriate tags to create ordered, unordered, and definition lists.

SAMPLE PERFORMANCE TASKS

- Given a list of markup language tags, discuss the effect of each on a Web document.
- Discuss how created documents can be viewed using Netscape or Internet Explorer.
- Discuss and construct basic HTML documents from Note Pad or Word Pad.
- Open and view constructed documents with Web browsers to determine HTML and other markup language tag effects.
- Use markup language tags to format the look of typed text in the body of a Web document so that it works correctly when it is viewed with a Web browser.
- Using the appropriate HTML tags, construct a form data submission field that will post the input data to a specified e-mail address and post the data to a specified HTML document, i.e., a guest book.
- Using the appropriate HTML tags, construct a basic frame page with 3-linked pages. Using appropriate targeting tags, make the linked pages appear in the pre-determined target area.
- Use markup language tags to format ordered and unordered lists in a Web document so that it works correctly when it is viewed with a Web browser.
- Experiment with “type” attributes to produce different effects.
- Using the appropriate HTML tags, construct one ordered, one unordered, and one definition list. One of the three lists must be nested and contain different “type” bullet item identifiers.

INTEGRATION LINKAGES

Computer Science, World Wide Web Consortium (W3C), SkillsUSA-VICA, HTML Writers Guild (HWG), Internet Navigation Skills, Math, Language Arts, Art & Design, Art, Computer Application Skills, Secretary’s Commission on Achieving Necessary Skills (SCANS), Computer Architecture, E-Commerce

Web Page Design I

STANDARD 7.0

Students will construct a Web page.

LEARNING EXPECTATIONS

The student will:

- 7.1 Demonstrate proficiency in inserting, resizing, and displaying basic images within markup language documents.
- 7.2 Manipulate white space, borders, and alignments to enhance the layout and look of a Web page.
- 7.3 Create, organize, and manipulate tables using the appropriate HTML tags and other markup language tags.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:

- 7.1.A Analyzes the concept of graphic images in Web design.
- 7.1.B Resizes a graphic image's appearance.
- 7.1.C Links graphics on a Web page.
- 7.1.D Analyzes the use of tags to represent and execute hyperlinks with images.
- 7.2.A Controls alignments, white space, and borders to enhance the look of a Web page.
- 7.2.B Determines how alignment of images will affect the text layout of a document.
- 7.3.A Constructs standard tables within markup language, such as HTML documents.
- 7.3.B Manipulates tables to include cell spanning, cell background color, cell padding, border size, and color.

SAMPLE PERFORMANCE TASKS

- Assess and provide examples of each of the popular graphic types.
- Use appropriate tags to align images, with or without text, to their desired locations in the Web page.
- Using the appropriate HTML tags, insert a predetermined graphic image into an existing Web page. The imported graphic must constrain to predefined image size.
- Use an imported graphic image to represent and execute an internal or an external hyperlink.
- Align the image to the left, right, and center. Determine the alignment's effect on "wrapped" or adjoining text.
- Experiment with alignment, paragraph and line break tags to manipulate the white space and borders to make the Web page visually appealing.
- Enter text from an existing Web page onto notepad. Duplicate the page's look by inserting the appropriate tags that will insert and align images with text, background color, and page layout. Experiment with the page borders and white space to change

the look of the page layout. View the constructed page in a Web browser to determine results.

- Utilize basic table tags with Web pages to organize content and enhance layout.
- Distinguish between the various attribute tags that enhance table layout and look.
- Using an existing Web document, use the appropriate HTML tags to incorporate the use of tables. Further enhance the tables using cell color, spanning, and padding.

INTEGRATION LINKAGES

Computer Science, World Wide Web Consortium (W3C), SkillsUSA-VICA, HTML Writers Guild (HWG), Internet Navigation Skills, Math, Language Arts, Art & Design, Art, Computer Application Skills, Secretary's Commission on Achieving Necessary Skills (SCANS), Computer Architecture, E-Commerce

Web Page Design I

STANDARD 8.0

Students will organize and connect multiple Web documents using hyperlinks, anchors, and bookmarks.

LEARNING EXPECTATIONS

The student will:

- 8.1 Differentiate between internal and external hyperlinks.
- 8.2 Discuss the use of internal Uniform Resource Locators (URL) relative to document and object location within the Web site.
- 8.3 Review the procedures used to emplace bookmarks and anchors to easily navigate within large complex documents.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:

- 8.1 Restates the relationship between internal and external hyperlinks.
- 8.2 Explains the principals behind relative and absolute Uniform Resource Locators (URL).
- 8.3 Explains the procedure to emplace bookmarks or anchors within complex or lengthy Web documents.

SAMPLE PERFORMANCE TASKS

- Provide students with a multi-page site with a requirement to create links for each page with a central or home page. Both the relative and absolute uniform resource locators (URL) must be given for each hyperlink emplaced.
- Given a Web page listing the 50 states, students must emplace alphabetical bookmarks that will correspond to state names.

INTEGRATION LINKAGES

Computer Science, World Wide Web Consortium (W3C), SkillsUSA-VICA, HTML Writers Guild (HWG), Internet Navigation Skills, Math, Language Arts, Art & Design, Art, Computer Application Skills, Secretary's Commission on Achieving Necessary Skills (SCANS), Computer Architecture, E-Commerce

Web Page Design I

STANDARD 9.0

Students will evaluate Web browser restrictions with markup languages, such as HTML.

LEARNING EXPECTATIONS

The student will:

- 9.1 Analyze non-standard tags that are proprietary in nature, not understood, or properly interpreted by all Web browsers.
- 9.2 Evaluate characteristics unique to Web browsers, i.e., margins and leading white space.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:

- 9.1.A Identifies from a list, which tags are W3C standard.
- 9.1.B Differentiates between tags that are unique to commercial Web browsers.
- 9.1.C Explains the differences between Web browser initial page representations.
- 9.2 Explains margins and leading white space.

SAMPLE PERFORMANCE TASKS

- Choose from a list of tags and identify which are standard or proprietary to unique Web browsers.
- Develop a presentation for the class or a community group on the characteristics of individual Web browsers which are unique with regard to their interpretation of Web pages.

INTEGRATION LINKAGES

Computer Science, World Wide Web Consortium (W3C), SkillsUSA-VICA, HTML Writers Guild (HWG), Internet Navigation Skills, Math, Language Arts, Art & Design, Art, Computer Application Skills, Secretary's Commission on Achieving Necessary Skills (SCANS), Computer Architecture, E-Commerce

Web Page Design I

STANDARD 10.0

Students will evaluate markup language tags as identified by the W3C.

LEARNING EXPECTATIONS

The student will:

- 10.1 Explain depreciated tags.
- 10.2 Differentiate between tags which are standard and those which have been depreciated.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:

- 10.1 Defines the term “depreciated tag.”
- 10.2 Identifies from a list, which tags are W3C depreciated and which are standard.

SAMPLE PERFORMANCE TASKS

- Choose from a list of tags and correctly identify which are standard and which have been depreciated.

INTEGRATION LINKAGES

Computer Science, World Wide Web Consortium (W3C), SkillsUSA-VICA, HTML Writers Guild (HWG), Internet Navigation Skills, Math, Language Arts, Art & Design, Art, Computer Application Skills, Secretary’s Commission on Achieving Necessary Skills (SCANS), Computer Architecture, E-Commerce

Web Page Design I

STANDARD 11.0

Students will evaluate the process for creating and editing graphic images for the Web.

LEARNING EXPECTATIONS

The student will:

- 11.1 Demonstrate how to create a simple background image.
- 11.2 Edit image brightness, contrast, file size, and resolution.
- 11.3 Choose between image file size and image visual quality.

PERFORMANCE STANDARD: EVIDENCE STANDARD IS MET

The student:

- 11.1 Creates basic background images.
- 11.2 Explains procedures for basic photo editing.
- 11.3 Differentiates between image size and image quality.

SAMPLE PERFORMANCE TASKS

- Constructs images that successfully tile to create backgrounds.
- Edit existing photographs to enhance brightness, contrast, size, and resolution for easier loading.
- Choose a visually acceptable balance between photo file size and photo resolution.

INTEGRATION LINKAGES

Computer Science, World Wide Web Consortium (W3C), SkillsUSA-VICA, HTML Writers Guild (HWG), Internet Navigation Skills, Math, Language Arts, Art & Design, Art, Computer Application Skills, Secretary's Commission on Achieving Necessary Skills (SCANS), Computer Architecture, E-Commerce

Web Page Design I

STANDARD 12.0

Students will apply the appropriate process and technique to create animation.

LEARNING EXPECTATIONS

The student will:

- 12.1 Comprehend basic animation creation
- 12.2 Comprehend the application of appropriate background color for use in animation creation.
- 12.3 Explain tweening techniques to construct complicated animation.
- 12.4 Create animation.

PERFORMANCE STANDARD

The student:

- 12.1 Constructs basic animations.
- 12.2 Selects the appropriate color or transparency for use with animation on the web page.
- 12.3 Applies the principals of tweening to construct complicated animations for use in a web page.
- 12.4 Creates a complicated animation.

SAMPLE PERFORMANCE TASK

- Given the dimensions and timing data, students use text to construct a basic animation sequence.
- Illustrate variations using background color and transparency.
- Use tweening to construct a complicated animation sequence using at least 100 frames, transitioning color, effect, position, and opacity.

INTEGRATION/LINKAGES

Computer Science, World Wide Web Consortium (W3C), SkillsUSA-VICA HTML Writers Guild (HWG), Internet Navigation Skills, Math, Language Arts, Art & Design, Art, Computer Application Skills, Secretary's Commission on Achieving Necessary Skills (SCANS), Computer Architecture, E-Commerce

Web Page Design I

STANDARD 13.0

Students will demonstrate proficiency with the features and utilities available with commercial off-the-shelf (COTS) Web building software

LEARNING EXPECTATIONS

The student will:

- 13.1` Demonstrate familiarity with features of COTS Web publishing packages.
- 13.2 Use COTS Web publishing software to construct complicated page features.

PERFORMANCE STANDARD

The student:

- 13.1 Develops Web pages using COTS products.
- 13.2A Differentiates between COTS limitations and abilities.
- 13.2B Analyzes the function of markup language skills in development of Web pages with COTS software.
- 13.2C Develops Web pages using HTML skills in conjunction with COTS software.

SAMPLE PERFORMANCE TASK

- Constructs several Web pages with COTS products.
- Assesses the abilities and limitations of each product.
- Using HTML scripting abilities from previous lessons, modifies the constructed pages in those areas that the COTS would not perform.

INTEGRATION/LINKAGES

Computer Science, World Wide Web Consortium (W3C), SkillsUSA-VICA, HyperText Markup Language Writers Guild (HWG), Internet Navigation Skills, Math, Language Arts, Art & Design, Art, Computer Application Skills, Secretary's Commission on Achieving Necessary Skills (SCANS), Computer Architecture, E-Commerce

SUGGESTED RESOURCES

World Wide Web Consortium - <http://www.w3c.org>
HTML For The World Wide Web 4 – Elizabeth Castro
HTML Writers Guild <http://www.hwg.org>
Netscape Navigator/Communicator
Microsoft Internet Explorer 4x/5x
Macromedia Dream Weaver
Microsoft Front Page
SkillsUSA-VICA – skillsusa.org
Adobe PhotoShop